

PLANTERS BEGIN

Technical Reports Will Be Main Feature of Big Yearly Convention Here

Conference Opens With Large Attendance of Delegates From All Islands

(Continued from Page Six)

Basic Work At Pagan Station

Secretary W. O. Smith thought a substantial amount of work done at Pagan station for unrigged plantations desirable, as much of the work done at Honolulu does not apply except to irrigated plantations.

E. F. Bishop asked Dr. Agee whether it would be advisable to duplicate experiments in the two places and the director answered that it would hasten results with new varieties. He stated and repeated that at the main station the basic ideas could be worked out by research and investigation.

The practical application of these basic ideas could be arrived at sooner if experiments were carried on under scientific supervision at more than one center. C. F. Eckart said the experiment station work is a guide only and that each plantation must still settle its own peculiar problems and maintain individual trial plots and experiments.

One-Year Ratons

Passing to the subject of one-year ratons, Dr. Agee thought the superior results from May to May cane over January to January, surprising. G. F. Renton asked, why? Director Agee confessed he did not know unless it was a matter of soil temperature. In March and May the soil is getting warmer while in January the ground is cold and growth is slow. On this point George Ewart said: "This is nothing new. If you had lived in Kohala thirty-seven years ago, you would remember that we always practiced harvesting one-year ratons from March to May."

Mr. Renton repeated that he could not see why eight month old ratons should be better than twelve month cane. E. K. Bull thought it might be a question of varieties. Mr. Agee thought the rule applied to all varieties. Taelling may be a controlling factor, he said. James Gibb, G. F. Renton and J. T. Muller talked taelling and raised the point that often only one stalk in a stool tasselled while the others simply ripen without flowering. Dr. Agee said that point is being studied and in time a report can be made on the percentage of stalks that flower in the stool.

This concluded the discussion of the director's report.

Plowing In Trash

H. B. Penhallow, chairman of the committee on cultivation, fertilization and irrigation on irrigated plantations then read his report. The question of what disposition to make of the trash, whether to plow or burn was strongly debated.

In opening the discussion Mr. Penhallow said that the "water saving" where trash has been plowed under on irrigated plantations is very evident. G. F. Renton said the trash question is a labor proposition pure and simple. If there are plenty cutters and loaders the trash can be left on the field, other wise the only thing to do is to burn. To this, Mr. Penhallow replied that leaving the trash costs more labor to harvest but the saving on hoeing equalizes losses. Cutting costs thirty percent more if the cane is unburned but the men work 85 per cent of the time now since the bonus system was started, as against 75 per cent of their time formerly.

W. O. Smith reminded on Kauai practices in the old days. "We never used to burn until the cane borer came," he said, "but in those days laborers were paid five dollars a month. If it costs less now to harvest after burning, the cost must govern practice." Manager Renton added that he was convinced the trash ought to go into the soil. "But—"

Fallow Better Than Trash

L. Weinheimer compared former Kona practices where the trash was plowed under until they had to discontinue the practice on account of low labor. "I have reduced my plant cane area from 2500 to 1000 acres since I commenced burning," he said. "I believe in fallowing instead of trashing. It puts the soil in better shape and we get bigger crops. The plantation that burns its cane can grow all ratons."

W. W. Goodale said his practice is to burn only once, before harvest. "Cutting and loading are tedious now and we have to burn to get the cane harvested at all," he said. "I believe in fallowing on different plantations. I oppose burning because when you burn a field you burn sugar," he said. "At Oahu we have fields that have never been plowed since the plantation was first established in 1897. These fields have been ratooned year after year and still yield nine tons of sugar per acre."

P. P. Baldwin said he tried the trash experiment on a new field of plant cane. "At the end of the crop the trash was over three feet deep and it almost broke the whole plantation to harvest fifteen acres of ratons. It all depends on the cane," he said. "A forty-ton field could have the trash left on the ground but an eighty-ton field would be swamped."

H. A. Baldwin spoke of the difficulty of getting labor to cut and load on burned cane. "There is one advantage of plowing under the trash and that is that it makes the soil warmer. We kept a record of soil temperatures this year," he said, "and the land where the trash had averaged two degrees warmer throughout the season than where there was no trash cover."

Dr. Agee in answer to a question said the cane beetle originated in a family of insects that did not eat live plants. Therefore if the trash is

TRACTOR PLOWS REPLACING FOWLERS

'It Does the Work' Is Comment of Managers On New American Invention

The Lurline yesterday brought two more 75-horsepower tracklayer plow sets for the plantations. Eleven gas engine plow sets of improved construction and design have been sold by The H. Davies & Company to sugar and pineapple plantations during the last three months. These outfits, known as the Best Tracklayer, are manufactured at Oakland, California, by the C. L. Best Company.

The tractors, developing thirty, forty and seventy-five horsepower respectively, are of the caterpillar type. The plow sets accompanying them are of the simplest and strongest construction. The whole outfit at once appeals to the average plantation man on that account. These implements are simple in construction and as near fool-proof as any agricultural machinery can be.

"Made in America." The Best Tracklayer is in operation at Wahiawa on two of the pineapple plantations, and John Hind, the veteran Kohala sugar planter, approves of them and is trying them out. That of itself is a guarantee of quality.

"The Tracklayer does as good work as the standard Fowler plows," George Angus said yesterday. "and will work faster and cheaper. It costs less in the first place and we believe is destined to displace the more cumbersome steam plows and stationary engines heretofore used. The tractor climbs hills, or works on side-hills. In California they are breaking up tule marshes with it, and it will travel over stumpy and strong ground."

"I've seen this thing in use, and the Best Tracklayer plows turn under guava stumps six inches through at the butt. Lantana or small brush is simply 'pie'—the outfit waits right through lantana without a hitch. All that is necessary in breaking guava and lantana land is to cut the brush low enough to give clearance for the Best Tracklayer, which stands six inches above the share," he stated.

"What we think this outfit is going to be best for its turning under cane trash. The three-gang plow works on a three-out plan. At the top there is a disc plow with sharp cutting edge. Below that is a sixteen-inch mould-board share and beneath the mould-board a subsoiler. The disc cuts the trash and turns it into the furrow where the mould-board covers it. With this implement a layer of trash a foot thick can be buried and the whole soil bed stirred to a depth of thirty inches, without turning the soil subsoil up to the surface. It thus turns a 'bed' forty-eight inches deep and thirty inches deep at one operation."

"In addition to the gang plow we have a disc gang that turns a ten-foot bed ten to sixteen inches deep without subsoiling it, and a ten-foot disc double-rank harrow. These can be worked tandem by one tractor leaving the second bed mellow and in perfect condition for planting. There are no cast-iron parts in either the tractor or the tillage implements. They are built of forty-penny carbon steel and hard iron throughout."

"In California where a large number of these tractors are in use, some great records have been established," Mr. Angus said. "Libby, McNeill and Libby are doing as good work here they tell me. I will say this, that I believe we can plow cane land, cover it in the trash, and subsoiling to a depth of thirty inches at a cost of about 4.50 per acre and that is a good deal better than any other outfit can do."

turned under anomalies might change back to his original idea and let the cane roots alone. The meeting was then adjourned until half-past nine this morning. Reports of committees will be discussed at the forenoon session. The afternoon will be devoted to an executive session on labor matters, in the Planters' Association rooms in the Bank of Hawaii building.

Among Those Present

Andrew Adams, B. D. Baldwin, H. A. Baldwin, E. F. Bishop, A. W. Bottomley, E. K. Bull, George Chalmers, J. P. Cooke, Wm. G. Cooke, Jas. Campsie, J. M. Dowsett, C. F. Eckart, George Ewart, John Fassoth, H. P. Eaye, H. Foeke, David Forbes, A. Gartley, James Gibb, W. W. Goodale, J. F. O. Hagens, John Hlad, R. Renton, Wm. G. Hall, Chas. R. Hemenway, James Henderson, Richard Ivers, George Jamieson, P. C. Jones, James Johnston, E. Kopke, A. Lidgate, J. H. Mackenzie, R. D. Mead, J. T. Muller, J. B. Myers, W. G. Orr, L. T. Peck, H. B. Penhallow, L. J. Petrie, Wm. Pullar, Geo. F. Renton, Geo. Rodick, John M. Ross, John A. Scott, W. O. Smith, E. M. Swanny, E. D. Tenny, J. W. Waldron, L. J. Warren, John Waterhouse, Geo. C. Watt, John Watt, James Webster and L. Weinheimer.

All of the plantations companies were represented excepting Kona Development Company.

There were also present the following members of the planters' expert men station staff: H. P. Agee, director; O. H. Swezey, Dr. R. S. Norris, Dr. H. L. Lyon and L. D. Larsen.

HONOLULU INVITED TO TRADE CONVENTION

Invitations to attend the meeting of the National Foreign Trade Council, to be held in New Orleans, on January 27, 28 and 29, have been received by several prominent business men of the city. The meeting is for the practical and general discussion of the commerce of the United States, to meet the conditions which may be expected at the close of the present European war.

Ten Hawaiian Sugar Crops, 1906-1915

OCTOBER 1, 1905, TO SEPTEMBER 30, 1915.

(Compiled by Bureau of Labor and Statistics, Hawaiian Sugar Planters' Association)

HAWAII	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS
Olas Sugar Co., Ltd.	9,405	9,431	15,795	19,179	19,483	24,026	22,941	27,299	25,736	27,406
Puna Sugar Co.	967	1,172	1,691	1,891	1,943	2,026	2,021	2,073	2,073	2,073
Waialeale Mill Co.	10,765	8,186	9,761	9,496	10,424	13,365	14,332	13,073	14,928	16,141
Hilo Sugar Co.	11,751	11,649	12,853	12,291	12,368	12,301	13,872	14,031	18,937	17,905
Hawaii Mill Co., Ltd.	1,829	1,800	2,818	2,838	2,313	2,917	2,378	2,867	3,401	3,793
Onomea Sugar Co.	13,930	12,432	17,006	14,416	12,843	16,230	17,454	16,884	19,600	21,320
Papeete Sugar Co.	6,477	6,577	7,590	6,573	7,012	7,225	8,009	8,829	9,806	11,948
Honolulu Sugar Co.	5,853	5,502	7,511	6,943	6,541	7,293	7,450	7,901	8,567	9,852
Hakalau Plantation Co.	12,869	11,914	12,534	11,586	11,905	14,157	17,116	15,400	18,663	19,327
Lanipahoehoe Sugar Co.	7,864	7,848	7,944	8,004	7,970	8,058	9,087	9,676	11,193	11,730
Oakala Sugar Plantation Co.	3,223	5,352	5,195	5,646						
Kaunakakai Sugar Co., Ltd.	2,154	2,108	2,141	2,226	2,187	2,262	2,021	2,073	2,073	2,073
Kohala Plantation Co.	1,435	1,402	1,427	1,483	691	1,774	1,747	1,747	1,747	1,747
Kohala Mill Co.	6,358	6,355	12,355	10,299	5,526	7,282	9,461	8,846	7,087	9,261
Panama Sugar Plantation Co.	8,795	7,857	10,448	9,315	7,483	9,431	9,958	10,767	10,073	10,073
Honokaa Sugar Co.	7,940	6,894	7,657	10,533	7,562	9,134	8,209	10,103	7,272	8,613
Pacific Sugar Mill	4,331	2,931	3,459	5,363	5,055	7,499	7,001	8,538	6,259	7,353
Maui Mill and Plantation	2,296	2,501	2,453	2,765	2,221	2,648	3,016	2,803	2,700	2,809
Halawa Plantation	1,036	1,615	1,958	1,135	1,673	1,667	1,908	1,941	2,087	2,940
Kohala Sugar Co.	3,300	2,400	4,914	5,579	4,602	5,924	5,979	5,675	4,475	7,780
Union Mill Co.	2,570	2,328	3,259	3,100	1,811	4,022	3,990	1,769	2,808	3,437
Hawai Mill and Plantation	4,389	5,296	7,125	6,011	6,881	7,715	9,483	6,469	6,746	9,436
Panama Plantation	3,382	3,382	3,382	3,382	3,382	3,382	3,382	3,382	3,382	3,382
Kona Development Co., Ltd.	223	169	405	835	332	595	513	185		
Honolulu Sugar Co., Ltd.	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Honolulu Agricultural Co., Ltd.	6,940	7,063	9,628	4,712	6,580	6,659	8,002	5,510	5,909	6,781
Hawaiian Agricultural Co.	826	11,630	10,374	11,406	11,008	12,775	14,398	12,856	17,890	16,407
Total	137,750	143,891	180,159	172,341	158,819	198,456	209,290	197,415	217,654	240,785

MAUI

Pioneer Mill Co., Ltd. 22,509 | 23,099 | 27,146 | 27,518 | 27,299 | 29,174 | 28,336 | 27,804 | 28,302 | 33,229 || Olas Sugar Co., Ltd. | 1,638 | 1,448 | 1,765 | 1,829 | 1,796 | 1,698 | 1,707 | 1,738 | 1,627 | 2,173 |
Waialeale Sugar Co.	7,228	7,425	10,073	17,761	16,938	16,197	16,776	13,988	16,100	19,177
Kohala Plantation Co.	1,382	1,402	1,427	1,483	691	1,774	1,747	1,747	1,747	1,747
Kohala Mill Co.	43,632	44,143	56,150	52,728	56,865	55,000	60,010	50,310	56,500	56,780
Panama Sugar Plantation Co.	19,861	20,230	22,627	20,295	29,295	30,765	34,612	24,633	33,660	39,620
Maui Agricultural Co.	850	2,702	3,026	4,054	5,221	4,492	4,949	4,938	6,235	6,605
Kipahulu Sugar Co.	1,464	1,809	1,843	1,960	2,046	2,193	2,197	1,408	2,126	2,599
Total	**102,960**	**104,772**	**122,629**	**124,605**	**139,454**	**139,564**	**148,585**	**124,819**	**144,940**	**160,283**

OAHU

Honolulu Plantation Co. 16,646 | 19,178 | 18,996 | 18,568 | 18,373 | 17,143 | 16,692 | 19,337 | 20,154 | 18,383 || Oahu Sugar Co., Ltd. | 26,710 | 28,457 | 35,320 | 34,651 | 29,296 | 33,248 | 33,473 | 28,142 | 33,474 | 29,609 |
Ewa Plantation Co.	29,303	31,789	38,519	38,949	31,429	31,306	32,563	29,509	29,509	29,509
Apakoa Sugar Co., Ltd.	865	481	984	432	902	433	895	381	925	356
Waialae Co.	5,490	6,214	5,686	6,469	6,614	7,124	6,023	5,236	3,083	6,400
Waialae Agricultural Co., Ltd.	20,788	22,614	30,374	32,297	30,870	32,271	33,356	29,751	30,396	31,156
Kahala Plantation Co.	6,689	6,500	6,519	6,497	5,568	5,686	6,024	6,215	8,138	7,823
Lake Plantation	1,112	973	971	428	1,170	784	1,259	977	1,600	1,171
Kahala Agricultural Co., Ltd.	6,626	7,329	8,293	10,382	14,124	14,185	14,648	14,009	17,153	15,078
Waianae Sugar Co.	4,148	3,186	4,342	4,404	3,845	4,962	4,979	4,287	5,133	5,260
Total	**113,750**	**119,273**	**137,013**	**138,423**	**128,648**	**133,133**	**139,712**	**124,228**	**133,560**	**129,997**

KAUAI

Lihue Plantation Co., Ltd. 14,095 | 14,127 | 14,445 | 15,796 | 15,683 | 17,740 | 18,021 | 19,819 | 22,065 | 21,494 || Green Farm Plantation | 1,333 | 1,307 | 2,508 | 3,277 | 3,724 | 3,724 | 3,724 | 3,695 | 4,419 | 4,007 |
Koloa Sugar Co., Ltd.	5,570	5,553	7,261	7,203	7,709	8,990	8,006	5,886	8,572	9,502
McBryde Sugar Co., Ltd.	11,024	7,890	11,294	12,684	10,596	14,073	13,147	14,509	16,345	15,458
Hawaiian Sugar Co.	18,616	20,140	21,638	23,788	23,422	24,975	22,221	22,308	26,826	24,706
Gay & Robinson	2,099	2,590	2,675	3,564	3,323	4,684	4,688	4,821	5,172	5,259
Waimea Sugar Mill Co., The	1,550	1,425	1,790	1,707	1,585	1,689	1,922	1,610	2,356	1,404
Kohala Sugar Co., Ltd.	6,626	7,329	8,293	10,382	14,124	14,185	14,648	14,009	17,153	15,078
Estate of K. K. K.	4,680	680	731	769	828	828	828	811	992	795
Kilauea Sugar Plantation Co.	2,700	3,844	3,194	4,975	4,102	5,471	5,943	5,451	6,426	6,733
Maize Sugar Co.	7,986	6,696	7,408	4,684	5,828	4,168	5,219	7,415	10,680	10,944
Total	**74,753**	**72,081**	**81,322**	**89,787**	**90,169**	**100,668**	**97,041**	**100,336**	**120,884**	**115,380**

HAWAII

1906 1897 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 || 137,750 | 143,891 | 180,159 | 172,341 | 158,819 | 198,456 | 209,290 | 197,415 | 217,654 | 240,785 |

OAHU

113,750 119,273 | 137,013 | 138,423 | 128,648 | 133,133 | 139,712 | 124,228 | 133,560 | 129,997 |

KAUAI

74,753 72,081 | 81,322 | 89,787 | 90,169 | 100,668 | 97,041 | 100,336 | 120,884 | 115,380 |

Total **429,213**</ |